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ABSTRACT

This paper synthesizes leading national studies of academic labor markets and focuses on the implications of changes in faculty labor markets for comprehensive universities, four-year primarily undergraduate universities that are neither research universities nor liberal arts colleges. It draws on several national studies to present statistics on anticipated faculty supply and demand for higher education as a whole and then disaggregates those statistics for comprehensive institutions. It also presents responses to the changing labor market in several departments in comprehensive institutions, as indicated in preliminary findings from a field study in New England. Described are the means by which some institutions have responded to changes in their labor pools and how some departments remain passive while others act proactively. It is noted that the departments most successful in recruiting and retaining productive faculty are devising creative strategies to this end. Several ways are suggested in which comprehensive institutions might respond to changes in the faculty labor market. Changes in the demand side are preferred rather than initiating supply side activities. Activities include basing promotion, tenure, and pay increases in ways supporting differentiated career paths; promoting alternative sources of faculty, introducing flexible time-tables for promotion and tenure decisions, development by institutions of strong and unique programs in certain areas thus making themselves more attractive to prospective faculty. Contains 20 references. (GLR)

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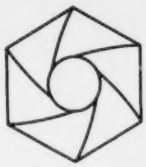

New England Resource Center *for* Higher Education

Working Paper #2

Assessing Faculty Shortages in Comprehensive Colleges and Universities

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Assessing Faculty Shortages in Comprehensive Universities

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Assessing Faculty Shortages in Comprehensive Universities

In the last two years, the national media and higher education publications have begun warning of faculty shortages. In the fall of 1989 Edward Fiske and Elizabeth Fowler wrote in the New York Times that colleges and universities would be facing major faculty shortages in the humanities and social sciences (Fiske 1989; Fowler 1989). A few months earlier, Joseph Berger (1989) warned in the New York Times that the "Slowing Pace to Doctorates Spurs Worry on Filling Jobs". The Chronicle of Higher Education has been running a series of articles on various aspects of the faculty labor market --concerning the extent of anticipated shortages and how colleges and universities are coping with them (Mooney 1989a; Mooney 1989b; Blum 1989), the pros and cons of academic careers ("The Pros and Cons..." 1989), and the "lost generation" of scholars (Heller 1990).

These articles present the overall picture, with some attention to differences among the disciplines. None identifies how different types of institutions will experience changes in the supply and demand for faculty. This paper focuses especially on the implications of changes in the faculty labor market for comprehensive universities, four-year primarily undergraduate universities that are neither research universities nor liberal arts colleges (Harcleroad and Ostar 1987; Youn, Finnegan, and Gamson forthcoming). It draws on several national studies to present statistics on anticipated faculty supply and demand for higher education as a whole and then disaggregates these statistics for comprehensive institutions. Next, the paper presents preliminary results from a field study of how several comprehensive universities in New England have been handling faculty recruitment and retention. It

concludes with a number of implications of these findings for future institutional responses to changes in the faculty labor market.

The National Picture

After a period of stagnation during the 1970s and 1980s, the demand for faculty over the next two decades will increase sharply. Combined with projected lags in supply, heightened demand will turn a buyers' market into a sellers' market. Short-range gaps between supply and demand are already beginning to be felt in some fields (El-Khawas 1989). Problems in the faculty labor market are projected to be most acute in the late 1990s and the early part of the new century (Bowen and Sosa 1989; McGuire and Price 1989). Bowen and Sosa predict shortages in the humanities and social sciences, especially after the year 2002, and McGuire and Price (1989) predict that heightened demand for faculty in the natural sciences will be greatest around 2000.

As early as the mid-1970s Allan Cartter, in Ph.D's and the Academic Labor Market (1976), predicted substantial shifts in the academic labor market. In his analysis of demand for faculty, Cartter distinguished between replacement demand and enrollment demand. Replacement demand is determined by faculty retirement and the net migration into and out of academic careers. Enrollment demand is determined by overall college enrollments and student-faculty ratios. In the 1970s and 1980s, replacement demand and enrollment demand were quite stable. In the 1990s, replacement demand will increase substantially as a result of the retirement of unprecedented numbers of faculty throughout the 1990s. Enrollment demand is projected to increase modestly, when the children of the "baby boomers" begin college and thus further increase the demand for faculty.

Bowen and Schuster, in American Professors: A National Resource

Imperiled (1986), forecast the need for 180,000 new faculty appointments in the second half of the 1990s and an additional 160,000 between the years 2000 and 2004. These 340,000 new faculty represent almost three-quarters of the current full-time faculty across the country. Bowen and Sosa's study of doctorate-holding faculty in the arts and sciences at four-year colleges and universities in 1987 --which represents about one-third of all full-time faculty-- conclude that more than half of the faculty are likely to have departed by 2002. These departures, overall, will be spread out at a relatively smooth and steady pace throughout the 1990. Tightening in the labor market will begin as early as 1992, and the most dramatic changes should occur between 1997 and 2002, when there could be about four candidates for every five open positions.

These supply-side estimates are based on projections that are less predictable than demand-side projections because of the variety of faculty pools from which institutions can draw. Furthermore, it is not clear how quickly graduate schools, the traditional source of new faculty hires, will expand after more than a decade of declining enrollments. For more than a decade, the graduate schools have lost ground in the competition for the most talented undergraduates. There is no reason to think that this traditional source will change overnight in its ability to supply faculty. Continuing financial pressures on graduate students and the general perception of low faculty salaries and declining work conditions will limit efforts to expand the professoriate (Bowen and Schuster 1986). Even if graduate enrollments do expand, the average time to complete the doctorate is approximately ten years after the baccalaureate (National Research Council 1989).

There are some indications that the faculty labor market has already

begun to shift. Senior administrators in a recent survey by the American Council on Education reported that it took them longer to find qualified faculty for full-time jobs and that they had a harder time getting top applicants to accept their offers (El-Khawas 1989). These conditions already exist within high-demand fields in the humanities and social sciences, which Bowen and Sosa project will experience shortages even greater than those in mathematics and the physical sciences.

Competition for faculty has begun to intensify; the competition is especially fierce for minority faculty. Institutions with enough resources are already raiding faculty from less fortunate institutions and "stockpiling" faculty against projected retirements. The outcome is that "institutions currently rich in faculty are destined to get richer --or, at a minimum hold their own-- while the poor are going to have to scramble mightily just to field minimally qualified faculty by decade's end" (Schuster 1990, 38).

Projected Shortages in Comprehensive Universities

In order to assess how changes in the faculty labor market will affect institutions with different resources, we must disaggregate overall projections. Uniquely among the various studies of the academic labor market, Bowen and Sosa estimate the size of faculty shortages among five types of four-year institutions, classified according to the Carnegie Classification of Institutions of Higher Education (1987). Included in their analyses are estimates for arts and sciences faculty in Research Universities I, other Research and Doctorate-Granting Universities, Comprehensive Universities I, Liberal Arts Colleges I, and other four-year colleges. In this paper, we will concentrate on the Comprehensive I universities. As defined by the Carnegie Foundation for the Advancement of Teaching (1987), Comprehensive Universities I have

enrollments of at least 2,500 students, offer master's degrees, and award more than half of their baccalaureates in occupational or professional fields.

Bowen and Sosa present current and projected figures for the five institutional types on the factors important to their projections. They examine two determinants of replacement demand: (1) faculty age distributions and (2) exits due to retirement and other reasons for leaving faculty positions. Then they look at two determinants of enrollment demand-- enrollments and student-faculty ratios.

Replacement Demand

Faculty Age Distributions. Looking at the first determinant of replacement demand, the age of the faculty, Bowen and Sosa find similar distributions across the different types of institutions. There are some differences, however, that are likely to have marked impacts on the faculty labor market. In particular, more faculty in comprehensive universities are in the middle age group, 40-49, than faculty in the other sectors: 43.2 percent of the faculty are in the 40-49 age bracket in comprehensives vs. 39.4 percent of the faculty overall. Fewer were in the youngest, under 40 group: 17.9 percent in the comprehensives vs. 21.7 percent of faculty overall. These modest age differences turn out to have substantial effects when projected over twenty-five years, as we will see below.

Exits. Because more faculty in comprehensive institutions are in their middle years, Bowen and Sosa estimate that a lower fraction of present faculty in these institutions will leave their jobs between 1987 and 1992 due to retirement or other reasons, compared to faculty over all of the types of institutions: 18 percent of the present faculty in

comprehensive universities and colleges will leave during this period, compared to 19.7 percent overall. However, between 1997 and 2002, 17.8 percent are expected to leave comprehensives while 16.8 percent are expected to leave overall. Compared to Research I universities, which are expected to lose 21 percent of their faculty between 1987 and 1992 and 15.9 percent between 1997 and 2002, faculty departures from comprehensive universities and colleges will be spread out over a longer period of time.

Enrollment Demand

Enrollments. Bowen and Sosa estimate that the increased enrollments starting in the middle 1990s, when balanced across the twenty-five year period between 1987 and 2012, will net very modest overall gains. In 1987, with an FTE enrollment of about 2.1 million students, comprehensives enrolled 37 percent of the total FTE's in the five Carnegie-defined sectors, making it the largest four-year sector. Between 1987 and 2012, enrollments in the five sectors are expected to rise by 193,000 students, an increase of 3 percent. Comprehensives are expected to increase by exactly the same percentage and to keep their share of enrollments at about the same level as in 1987. On the basis of these esimates, Bowen and Sosa argue that replacement demand will be more important than enrollment demand in determining the number of faculty positions to be filled.

Looking just at enrollments in arts and sciences disciplines, Bowen and Sosa show that comprehensive institutions awarded 19.6 percent of the degrees in these disciplines, compared to 16.4 percent across the five institutional types. The percentage of degrees awarded in the arts and sciences declined in colleges and universities from the mid-1970s through the 1980s, but dropped especially in comprehensives. If this trend

continues, the disciplinary distribution of faculty should also dramatically change.

Student-Faculty Ratios. In 1987 student-faculty ratios in comprehensive universities and colleges averaged 41.4 students per faculty member over all colleges and fields, compared to 29.6 per faculty member in all sectors. The high ratio for comprehensives reflects high enrollment in professional fields like business. When comparisons are made for student-faculty ratios in arts and sciences fields only, the figure for comprehensives stands at about the average of 10.3/1 for all five institutional types. Large declines in student-faculty ratios in arts and sciences fields have occurred across the sectors in the last ten years. The largest declines occurred within the comprehensive sector, which reduced its ratio of 16/1 in 1977 to a ratio of 10.6/1 in 1987.

Overall Projections

Bowen and Sosa's disaggregated estimates for faculty supply and demand between 1992 and 2012 are especially significant for comprehensive institutions. As a direct consequence of the high percentage of faculty in the 40-49 age group in 1987, comprehensives will need to replace their faculty somewhat later than the average for the five sectors. That is, comprehensive universities and colleges will renew their faculty to a greater degree in 1997-2002 and 2002-2007 than in 1992-1997. In these later periods, however, demand in comprehensives for faculty will more than double. On the one hand, this delay in demand for new faculty will give the comprehensives time to prepare. On other other hand, as Bowen and Sosa emphasize, the demand for faculty among comprehensives will be highest just when all academic labor markets will be tightest. Demand in comprehensives will peak at the same time that the overall ratio of .8

candidates per position is least favorable.

Preliminary Findings from the Field Study of Comprehensive Universities

How are comprehensive universities preparing for potential faculty shortages? The New England Resource Center for Higher Education is in the midst of a two-year field study of the responses of comprehensive universities to the issues of recruitment, retention and retirement of faculty. Preliminary findings from interviews in five arts and sciences and professional programs --English, mathematics, education, business and a variable fifth department with substantial faculty turnover-- provide qualitative understanding of the situation between the period from 1985 to 1995. In the discussion below, we examine how the departments are faring with respect to:

-difficulties in recruiting and retaining faculty

-faculty diversity

-sources of faculty

-the impact of working conditions

Difficulties in Recruiting and Retaining Faculty

Disciplinary differences in the operation of the faculty labor market are apparent. Some disciplines are already experiencing shortages in supply, while others are still inundated with applications for faculty openings. Professional fields -- for example, education, management and nursing-- are facing changes in their traditional labor pool. This is due only in part to replacement demand because of retirements and other departures. Departmental ambitions, as well as changes in accreditation requirements and state mandates in education, account for difficulties in filling some slots because they are operating in labor pools where the supply of faculty is limited.

Education is facing changes in state requirements for secondary

teacher preparation that affect faculty appointments. Secondary education specialists are increasingly attached to disciplinary departments rather than to schools of education. As education offers more diverse masters programs, faculty are being asked to do more research and graduate teaching. These forces are beginning to affect both supply of and demand for faculty in education. Schools of education are upgrading their requirements for their faculty, recruiting new faculty from a more limited supply of people with doctorates and scholarly achievements. Enrollment demand is increasing at the same time. With the reductions in teaching loads and the lower student-faculty ratios that go along with graduate teaching, as well as increases in the number of students majoring in education, the demand for faculty will be greater.

Similarly, some schools of <u>business</u> have raised their sights for faculty, especially those that seek accreditation from the American Assembly of Collegiate Schools of Business (AACSB). Those with AACSB accreditation or ambitions for it are having a hard time recruiting faculty with doctorates, while those without it can draw on a more plentiful supply of people without doctorates.

<u>Nursing</u> is encountering great difficulty in recruiting new faculty since the field has dramatically upgraded the credentials of its professionals and its curriculum requirements over the past few years. The number of masters programs that require faculty with doctorates has increased at a faster pace than available faculty. Nursing faculty members in comprehensive universities are often enrolled in doctoral programs in nearby universities. Nursing faculty with doctorates in a variety of fields are in such demand that their home institutions fear they will be lured away when they complete their degrees, even though

nursing faculty tend to be tied to particular locations.

Many different labor markets operate in the disciplines. Mathematics departments are increasingly relying on foreign-born mathematicians and the occasional applied mathematician from industry. English departments are much affected by shifts in general education requirements, teacher training mandates, and shifts in graduate school specializations. English departments still receive applications from hundreds of candidates for single openings, although this varies according to subfield. Composition specialists are in great demand, as institutions across the country have expanded undergraduate writing requirements and as education majors are being required to major in a discipline. English departments, like other departments, are using retirements and attrition to shift the specialties represented on the faculty. One regional state university was replacing traditional genre faculty with specialists in minority literature, feminist studies, and composition. A municipal private university is recruiting some new faculty in film study, in order to provide special tracks for their undergraduate majors.

Faculty Diversity

Recruitment of women into new faculty positions is proceeding fairly steadily, despite shortages in some fields like mathematics. However, the institutions in the study are finding it very difficult to recruit Blacks and Latinos because of small numbers of candidates. This difficulty is compounded by the under-representation of Blacks and Latinos in New England, the steep cost of living in the metropolitan areas of the region, and high levels of competition from other institutions on salary, perquisites and status. In order to have some Black and Hispanic presence, departments are experimenting with visiting professorships and lectureships, as well as adjunct appointments for people who work in

businesses or non-profit organizations in the area. Some departments are increasing diversity in terms of national background by hiring emigrés from other countries.

Sources of Faculty

McGuire and Price (1990) found that the independent colleges and universities in their study were responding to shortages in a number of creative ways. Some offered delayed or phased retirement to faculty in disciplines with shortages. Incentives, such as travel support, and professional development programs helped to retain faculty who might otherwise have left. Some institutions "stockpiled" faculty by conducting searches before they actually needed a replacement. Others looked for faculty from non-traditional sources rather than from among recent doctoral recipients. Institutions took advantage of the interest of accomplished people who wished to live in the region to be with family members or to move there after retirement.

The institutions in the New England study are equally creative. In areas where they are already experiencing some shortages, the departments in the study are beginning to think about alternatives to newly minted Ph. D.'s. A university that is assiduously developing doctoral programs, for example, has been recruiting senior faculty members to build their new programs; they do not want to take a chance on what they call "baby Ph.D.'s". Other institutions are hiring faculty members with several years of experience teaching in adjunct, visiting and non-tenured positions in other colleges and universities. Some are finding faculty who have held non-academic positions. In certain fields like mathematics, foreign nationals and naturalized citizens are being hired on tenure-track lines.

Like colleges and universities across the country, the institutions in the study are beginning to "groom their own" faculty by hiring people without terminal degrees and supporting them to complete their degrees. This approach has become especially attractive as a way to build up a larger contingent of minority faculty. Some institutions are contemplating the identification of promising undergraduates and giving them financial support for graduate school if they return to teach for a given period of time.

Some of the departments in the institutions in our study work closely with universities in their region to identify promising graduate students to teach part-time in their institutions. They are making efforts to support these graduate students to complete their degrees in the hope that they will remain as regular faculty. One of the departments hires ABD's whose specialties fit departmental needs on special multiple-year contracts and then supports them with assistance in writing grants to gain released time to finish their dissertations. Those with full-time teaching schedules are given convenient schedules and a large dose of emotional support. When they complete their degrees, their positions are converted to regular tenure-track positions. The original agreement with the person is that the conversion is automatic and once the degree is finished, the contract automatically becomes tenure track and starts ticking toward tenure. There is an assumption of good reviews during the term contracts, as well as in the tenure track appointment.

Impact of Working Conditions

Perceptions of working conditions are likely to affect how well colleges and universities fare in the competition for new faculty and in their ability to hold onto the faculty they have. Criteria for tenure

and promotion have been raised over the past few years in comprehensive institutions. While carrying twelve-hour teaching loads, junior faculty are expected to publish regularly. The younger, more research-oriented faculty, most especially in comprehensive universities, differ from the older, generalist and teaching-oriented faculty.

If Bowen and Sosa are correct in their projections that comprehensive universities will be recruiting large numbers of faculty at the most competitive point in the labor market, these institutions may find it difficult to continue to recruit research-oriented, specialist faculty in the coming sellers' market. Some institutions have already reduced teaching loads for research-oriented faculty when they have special research projects. Others offer support for travel to professional meetings and seed money for research and grant-writing. This may prove to be especially difficult for institutions facing financial constraints due to declines in state funding or to declines in enrollment.

Teaching and service are important sources of rewards in comprehensive universities, where loyalty to the institution and service to the region are more important than they are in research universities. Faculty within and across departments have interdisciplinary teaching opportunities and find congenial colleagues with whom they can conduct research. The definition of legitimate scholarship is broader at comprehensive universities, which encourages some faculty to experiment in their classrooms and to conduct pedagogical research. Team teaching may lead to team research and publication. Computer-based mathematics lab manuals and pre-calculus textbooks, as well as theoretical articles, have resulted from the broader opportunities for intellectual development and colleagueship at some of the institutions in the field study.

Many comprehensive colleges and universities pride themselves on offering a family-like atmosphere. Such institutions make serious efforts to accommodate two-career partners. It is possible for departments to offer opportunities for lively collaboration with colleagues. In the mathematics department in one of the comprehensive universities studied, the faculty have organized themselves into ongoing project teams focused on pedagogical research, basic research, and applied community projects. With support from the chair and the dean and purchases of equipment, the teams are generating twelve to thirteen grants each year. Camaraderie within the department is high: When the college budget could not support a complete remodeling of a classroom dedicated to computers, the faculty came in on the weekend with saws, hammers and paint brushes and finished the job.

Conclusion

This paper has synthesized leading national studies of academic labor markets. It has focused particularly on anticipated changes in faculty labor markets in comprehensive universities and colleges. Then, it presented responses to the changing labor market in several departments in comprehensive institutions, as indicated in preliminary findings from a field study in New England.

We have described the means by which some institutions have responded to changes in their labor pools. Some departments remain passive, while others are acting proactively. Innovations in recruiting and retaining faculty do not require major fiscal commitments, but they do demand deliberate action. The departments that are most successful in recruiting and retaining productive faculty are devising creative strategies to this end. As we look toward the 1990s, we will now suggest several ways in which comprehensive institutions might respond to changes

in the faculty labor market. While most national studies propose supply-side responses to shortages, such as increasing Ph.D. production with more fellowships and financial aid and speeding up the completion of the doctorate, we propose changes on the demand side.

Our interviews have demonstrated that some departments are experimenting with differentiated career lines. Some departments have introduced the idea of positions that are devoted primarily to research, others to teaching, and still others to various mixtures of research, teaching and service. Promotion, tenure and pay increases are being adjusted in ways to support differentiated career lines.

Another demand-side response is to actively promote alternative sources of faculty. Adjunct faculty who are well-known because they have taught for several years at a particular institution can be moved into full-time tenure track positions. ABD's can be "groomed" to complete their degrees while continuing to teach in adjunct positions. Promising undergraduates can be "grown" through graduate school in preparation for a position.

A third possibility is to introduce flexible time-tables for promotion and tenure decisions. Inflexible schedules and cumbersome or unrealistic standards inhibit responsiveness to competitive labor market conditions. Institutions should consider offering tenure-track faculty research and leave possibilities while "stopping the clock" for promotion and tenure decisions. They could also make good use of reduced and part-time teaching loads, and early promotion.

Finally, institutions may want to view prospective shortages as an opportunity to strengthen their niche by building strong and unique programs in certain areas, thus making themselves more attractive in the

competition for faculty. Our field study in New England suggests the competitive advantage of this approach in, for example, an unusual program in occupational health and safety, a strong capability in the performing arts, and a sharp focus on applied mathematics. These special features are important not only in attracting students, but in attracting faculty.

Changes in faculty labor markets, in other words, will have profound effects on many different aspects of colleges and universities. If the projection studies are accurate, the data should provide enough timely information to administrators to allow the labor market to self-correct, thus avoiding the very outcomes predicted!

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